

**THE ROLE OF LIBRARIANS IN BRIDGING THE DIGITAL DIVIDE IN
DEVELOPING COUNTRIES: A CASE FOR MALAWI**

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ABSTRACT: There are a number of definitions of the digital divide, but Elena Murelli (2002) in her book 'Breaking the Digital Divide: Implications for Developing Countries' defined it as the gap between those people who have access to the new information and communication technologies and those who do not. The digital divide is usually measured in terms of the number of telephones, computers, and Internet users. Between groups of people within countries, it is usually measured in terms of race, gender, age, disability, location, and income. It seems the gap is more prominent between developed and developing countries and within the people in developing countries. This gap has to be bridged lest it gets out of hand. It is therefore the duty of all stakeholders including librarians to work in partnership to ensure that the gap is narrowed. Now the question is what are librarians, especially those in developing countries, doing in bridging this gap? In an effort to bridge the digital gap, librarians in Malawi are involved in a number of activities such as: training in online information searching and retrieval skills, lobbying with the government to bring into the country duty-free ICT equipment for educational purposes, facilitating in the increase of Internet bandwidth and lobbying with government to improve ICT infrastructure in the rural areas. This paper outlines what librarians in conjunction with other stakeholders are doing and ought to do to narrow the gap. The paper has put emphasis on the role of librarians in developing countries especially in Malawi in narrowing this digital divide. There are a number of challenges that these librarians in Malawi meet in their efforts. Some of the challenges are inadequate resources, that is, human, financial and material resources, illiteracy, unavailability of local online content and lack of government policy on information services. However, there is always a way forward which the paper suggests.

Introduction

Malawi is one of the developing countries affected by the problem of the digital divide. But a lot is being done especially by librarians to bridge the digital gap. Below is what Malawi in general and librarians in particular are doing in trying to bridge the digital divide. Mentioned in the paper are some of the challenges the country and librarians face in mitigating the problem.

Definition of Digital Divide

The term is used to describe the discrepancy between people who have access to and the resources to use new information and communication tools, such as the Internet, and people who do not have the resources and access to the technology. The term also describes the discrepancy between those who have the skills, knowledge and abilities to use the technologies and those who do not. The digital divide can exist between those living in rural areas and those living in urban areas, between the educated and uneducated, between economic classes, and on a global scale between more and less industrially developed nations.

Bridging The Digital Divide in Malawi

Malawi as a nation is trying to bridge the digital divide as is evident in the various developments in ICT especially in the last ten years.

Developments in ICT

Improved telecommunications services. In the past ten years or so, telecommunication facilities have improved. Over the years Malawi has seen the introduction of cell phones, an increase in the number of telephone lines, radio stations, phone bureaus, Internet cafés and Internet service providers. Below are some figures for 2003 and 2006.

Table 1. Telecommunications indicators

	2003	2006
Cell phones	136,114	429,000
Telephone lines	37,371	102,784
ISP	6	10
Internet users	9,651	46,100
Mobile operators	2	2
Radio Stations	7	13

Source: NSO. Statistical Yearbook 2004.

Duty waiver on pre-assembled computers, printers, etc. The government removed duty on all pre-assembled computers and accessories. However, spare parts for computers are charged duty.

SchoolNet Malawi Project

SchoolNet Malawi currently has 50 participating schools. SchoolNet Malawi aims at providing Malawian children, at primary and secondary levels, with an opportunity to learn about new technologies in the field of ICT in order to compete in the global knowledge based economy. In line with the Ministry of Education's policy of equitable access to education opportunities, SchoolNet Malawi therefore, provides and facilitates ICT development in schools.

In providing and facilitating access to ICTs for schools, SchoolNet Malawi has the following objectives:

1. To market, lobby ICT development initiatives to schools, Community Based Organizations, private sector and the donor community.
2. To establish a well functioning, transparent organization that is capable of implementing ICT development in Malawi.
3. Building sustainable human resources capacities that are able to effectively implement the set programmes.
4. To provide schools with connectivity learning facilities, locally and internationally.
5. Collaboratively with the Ministry of Education, supplement the current schools education system with ICT content and curriculum.
6. Research and create ways of strengthening the development of ICTs in Malawi.
7. To develop a well functioning, sustainable technical distribution and support centre that is capable of providing services to the whole nation

Since its inception in 1999 SchoolNet Malawi has distributed over 832 computers to 50 participating schools.

Development of National Policies

The country has come up with a number of policies among which are the ICT for Development (ICT4D) Policy and The National Policy on Library, Documentation, and Information Services. The development of such policies give broad guidelines from which action programmes and services can be developed to facilitate meaningful involvement of the national information infrastructure in the country's vision and strategic planning.

Malawi Librarians in Bridging the Digital gap

Librarians in Malawi are involved in a number of activities that aim at bridging the digital gap in the country and beyond.

Increased Bandwidth and Optimize its Usage

Librarians are in the forefront in increasing and optimizing usage of bandwidth. One of the major activities is the establishment of the Malawi Library Information Consortium (MALICO) (<http://www.malico.mw/>) whose main objective is to improve access to electronic information. MALICO has within a few years of its existence:

- Brought into the country four V-SATs with funding from the Open Society Initiative for Southern Africa (OSISA) among other donors. These V-SATs were installed in February 2005. Three of the four V-SATs are at University of Malawi colleges namely: Bunda College of Agriculture, Chancellor College and College of Medicine and the fourth one is at Mzuzu University. The coming of the V-SATs has increased the bandwidth ranging from 128kbps - 512kbps uplink and 256kbps – 1mbps downlink. This translates to an increased access to electronic information by users. Those libraries and information centres without a V-SAT connection, request the V-SATs sites to assist in downloading large amounts of information for them. However, it is the intention of MALICO to have all its member institutions connected to the V-SATs through either a radio link or any other technology. The installation of the four VSATs has eased and increased accessibility to electronic information. Below are some statistics for January – June 2006 from International Availability of Scientific Publications’ (INASP) Programme for the Enhancement of Research Information (PERI). MALICO members contribute to the subscription of e-resources offered to the country by PERI and eiFL (Electronic Information for Libraries).

Table 2. Statistics on use of PERI Resources in Malawi January-June 2006

	January	February	March	April	May	June	TOTAL
Users	86	86	106	131	157	157	2452
Searches	649	1049	654	476	720	1093	4641
Table of Contents	0	3	26	2	4	4	39
Abstracts	150	325	208	137	217	323	3632
Articles	248	434	368	281	377	464	2172

Source: <http://www.inasp.info/scgi-bin/peri/admin/>

- Subscribes to electronic journals through PERI and eiFL programmes. Some of the electronic resources, which MALICO subscribes to for its members, are Ebsco Host, Emerald, Oxford University Press E-Journals, African Journal Online and Springer. MALICO subscribed to e-journals worth US\$20,000 for 2006.

Apart from the e-resources which MALICO subscribes for its members, libraries in Malawi access to other e-resources which are offered for free through organizations such as Food and Agriculture Organization (FAO), World Health Organization (WHO) and The Technical Centre for Agriculture and Rural Development (CTA). Some of the resources are AGORA (Access to Global Online Resources in Agriculture), HINARI (Health InterNetwork Access to Research Initiative).

Digitizing Malawi Publications

Individual libraries, although still few, are moving closer to digitization of Malawi publications so that they are accessible online. For instance the College of Medicine of the University of Malawi (UNIMA) using Greenstone software has digitized over 300 publications that are accessible online. University of Malawi, Central Library Services bought digitization equipment almost two years ago to use for digitizing Malawiana, but the equipment is yet to be utilized because of lack of appropriate software and expertise. All University of Malawi Libraries including Bunda College Library are looking forward to participate in the digitization once everything is in place. Another initiative again by the University of Malawi Libraries is the development of a proposal for funding to digitize Malawiana and create institutional repositories as part of plans to commence a master's degree programme in library and information science. Digitization is one of the research areas in the programme. The proposal was sent to Norway for possible funding by NUFU (Norwegian Council for Higher Education's Programme for Development, Research and Education and other partners). Even if this proposal does not get external funding, UNIMA libraries are determined to commence the degree programme by 2007 using its local resources.

Capacity Building

Librarians are actively involved in capacity building for ICT in an effort to bridge the digital divide.

- ***Internet for Influence Programme.*** In this programme, which was initiated by the British Council (Malawi office), librarians train different groups in how to use computers in general and how to access electronic information using the Internet in particular. So far some women members of parliament, young women leaders, journalists and lawyers have been trained.
- ***Use of Electronic Information Resources.*** On a regular basis, librarians train their users on how to search and retrieve quality and relevant electronic information. Training is done by individual institutions or with the support of organizations such as MALICO, Malawi Library Association (MALA), International Network for the Availability of Scientific Publications (INASP), IAMSLIC, Food and Agriculture Organization (FAO) and Technical Centre for Agriculture and Rural Development (CTA)
- ***Introduction to Library Automation Course.*** The Malawi Library Association (MALA) runs a one year certificate course in library studies for its members and those interested. Among the topics covered is an introduction to library automation. The association also organizes short courses on ICT. The course introduces the various uses of ICT in libraries and information services.
- ***ICT training by the Information Resource Centre (IRC) of the American Embassy.*** Librarians at IRC have conducted ICT training since 2001. They target groups working in areas such as education, health, judiciary, HIV and AIDS, small and

medium enterprises, and those belonging to various religious groups. So far the section has trained over 200 people. IRC through the Public Affairs Section of the Embassy has also established what they call '*American Corners*' in the three major libraries in the country's three regions. American Corners are like Internet cafes with at least five computers on a network. They are open to the general public at a small fee for Internet access.

- ***Library and Information Science and ICT degree programmes at Mzuzu University.*** In 2005 the Faculty of Information Science and Communication at Mzuzu University started two bachelor's degree programmes aimed at reducing the shortage of trained personnel in the areas of library and information sciences and ICT in Malawi. The programmes had an initial intake of over 15 students each. Once the programmes start graduating students over the next two years, the country will experience an increase in the number of trained personnel who will make a substantial difference in the 'fight' to bridge the digital gap.

National Library Services of Malawi – ICT Activities

National Library Services of Malawi (NLS) is one of the largest libraries in the country offering a number of programmes and services throughout the country using its own resources and those from its partners such as Book Aid International, CODE Canada, NORAD, World Bank and Malawi National AIDS Commission. Among its activities are offering ICT services to its users. Below are some of the notable initiatives:

- ***Mother and Child Project.*** The project, which aims at encouraging mothers to read and tell stories to their children, has introduced computer games and lessons so that the children are encouraged to learn how to use computers at a very early stage. The children involved are aged between three to twelve years. The project which started at the head library in Lilongwe is one year old, and is to spread to the other two regions of the country by 2007.
- ***Baobab Project.*** National Library Services is embarking on a project to provide some low cost ICT services in its ten branch libraries scattered throughout the country through what is called 'Baobab project'. In this project, NLS would acquire at least two low cost computers (costing about US\$160 per computer) running on low power (110amps) for each branch library. These computers are to run on solar panels or wind turbines with a high life battery. It is envisaged that once NLS install these computers would be used for OPAC (using Koha <http://www.koha.org> - open source software) and access to the Internet. Most of the NLS branch libraries are in rural areas with no electricity. As such this project will enable branch libraries to offer certain ICT services to the users, especially in rural areas.

Malawi Research and Education Network (MAREN) Activities

Librarians are participating in MAREN activities to ensure fast and reliable Internet connectivity. MAREN was founded in October 2005 to offer a single focus for pursuing excellent Internet connectivity for the Tertiary Education and Research Sectors in

Malawi. It builds on the head start offered by Malawi Library and Information Consortium (MALICO) VSATs network but aims to go further by providing fast fiber connectivity linked to neighboring countries, to the rest of Africa and to the EU academic network. Until it gains its own legal identity, MAREN is working within the legal framework of MALICO. Currently members are the two public universities – University of Malawi and Mzuzu University and the National College of Information Technology. MAREN works in a regional grouping known as UbuntuNet Alliance for Research and Education Networking. The vision of delivering very high speed - gigabits (Gb/s) connectivity instead of the current kilobits (kb/s) between African Universities and Research Institutions is driving the Alliance forward at a rapid pace. So far MAREN has been involved in the following activities which are now at various stages:

- Developing a campus connected with fiber cables for the University of Malawi sites: College of Medicine and related medical research complexes, Blantyre Campus of Kamuzu College of Nursing and the Malawi Polytechnic
- Working with ESCOM, (the Electricity Supply Corporation of Malawi), to utilize the two fiber strands given to MAREN for academic connectivity for 3 years
- Working with MACRA, (Malawi Communications Regulatory Authority), for harmonious regulatory conditions for academic connectivity
- Collaborating on the activities aimed at establishing the Malawi Internet Exchange.

Challenges

Despite the positive developments mentioned above, the battle to bridge the digital divide is facing a number of challenges:

- **Funding.** There is a lot of dependence on donors/partners to fund activities that aim at bridging the digital gap. Libraries in Malawi are getting funding support from partners such as FAO, Norwegian Agency for Development (NORAD), Book Aid International, World Bank, Department for International Development (DFID), Japanese International Cooperation Agency (JICA) and Swedish International Development Agency (SIDA) for most of their ICT activities and programmes. Most of the institutions have no budgets for ICT. This is not a healthy situation considering that partners may one day decide to withdraw their support.
- **Inadequate ICT Expertise.** The country does not have enough people with ICT skills, especially librarians. This is an area in which Malawi as a country has not done well. There are about twenty trained librarians and 20% of them have very little expertise in ICT. However, the introduction of two degree programmes on Library and Information Science and ICT at the Faculty of Information Sciences and Communications of Mzuzu University and the impending commencement of a master's degree programme by the University of Malawi, gives hope for good things

to come. Once these programmes start graduating candidates over the next three years, the situation will improve.

- **Illiteracy.** Malawi has about 20% of its population aged 5 years and above that have never attended school¹. Very few of the Malawians who are literate have even basic computer skills. Much as librarians and others are involved in computer skills training, there is a lot to be done. In addition, there is growing concern in Africa in general and Malawi in particular on the absence of African languages on the Internet. Gumisai Mutume² writes “The dominance of European languages has limited the spread of Internet use by excluding those not fully literate in those languages”. However, the activities of SchoolNet Malawi and National Library Services – Mother and Child project are some of the mitigating efforts to increase computer literacy skills.
- **Malawi Content Online.** There is not much Malawi content online. Librarians are supposed to seriously embark on digitization of Malawiana publications and make them available online, once the digitization efforts outlined above start bearing more fruits.

Conclusion

Librarians in Malawi, both within their own capabilities and by working with other stakeholders, are doing a lot to bridge the digital gap. However, there is a long to go.

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¹ National Statistical Office of Malawi (2005). pg.27.

² Mtutume, Gumisai. pg. 14

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